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PREAMBLE

Because there is a huge shortage of potable water, worldwide, and because of the expense to produce this clear and most important drinkable liquid, any ideas or devices that would alleviate some of the vast shortages, anywhere, would certainly find appreciation.

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SPECIFICATIONS

0001 Because there is a huge shortage of potable water worldwide and because of the expense incurred producing this clear and most important drinkable liquid any ideas or devices that will alleviate some of the neediness, anywhere, would certainly be appreciated.

0002 I have invented a device which will save approximately half the water used in the flushing of toilets where they are installed. The existing toilet handle will be replaced with a new Handle, as part of this invention. One that swings from a central setting, to the right or left position. Further, when moved to the right position Apportioned water from the toilet tank will discharge liquid waste from the toilet bowl. When moved to left position both solid and liquid waste will be discharged, as is normal.

(The invention will be linked with any existing toilet tank mechanisms to complete this function. That mechanism will remain in tact.)

0003 To understand why this invention is so important consider how many times each human eliminate liquid waste in any time period, (and the savings of water that will result). Compare that to the one or two removals of solid waste for the same period. Then consider all this for a population's necessities.

Received
3/14/03

TITLE OF INVENTION

0004 Supplemental Toilet Flushing System with Resultant Savings of Water

DESCRIPTION OF OPERATION

0005 Invention Mechanisms are as Shown on Drawing No.1

The drawing shows three (3) diagramatical mechanical sections:

The FIRST SECTION detail, the device mechanism 'at rest'. The toilet Handle in a central position, facing down, vertically. The water level is at maximum. That will be maintained by any existing flushing mechanisms.

(Note: If Flush Industries were to manufacture its own mechanism similar to existing systems then the newly patented invention would be consolidated into that mechanism).

The Handle's shaft extends horizontally into toilet tank. On the shaft are two cantilever attachments mounted on either side of the shaft.. They will rise or fall, depending on the position of the Handle. (detailed as shown for Tier 1 and Tier 2 on the drawing).

0006 Mounted on the Cantilever Attachment for the Tier 1 position is a Spring. The bottom of the Spring is attached to the vertical Arm No 1. on the base of the water Discharge Valve. When Arm# 1 is in the raised position water it will discharge into toilet bowl to create the Tier 1 flush.

Also, linked and in parallel, with Arm No 1 is Arm No 2. Arm No 2 enters a Cylinder with mechanisms that Apportion the flow rate for the flush, and to reposition and recycle the Discharge Valve (after the flush). Drawing shows a solution for the water valving system. An Apportioning system could also be shown to operate pneumatically to effectuate the same savings.

0007 SECOND SECTION: Tier 1 operation, as shown on the drawing, the Handle is revolved to the right. The Shaft Cantilever attachment will rise. The Spring will be compressed and simultaneously Arms No 1 and No 2 will rise. The water in the valve Cylinder will be ejected to begin the refill cycle again. The Discharge Valve at the bottom of Arm No 1 will open. This allows water in the tank to discharged into the toilet bowl for the flush. The Spring will apply pressure onto Arm No 1 and Arm No 2 and an adjustable Weight protruding from the bottom of the Cylinder on Arm No 2 and the Spring will also apply pressure on Arm No 1 to close the Discharge Valve. On Arm No 2, installed in the upper part of the Cylinder is an Apportioning Valve, which controls the flow of new water provided by the existing toilet mechanism, as the existing floating ball rises. the Cylinder, is an Apportioning Valve-- which control the flow of new water provided from the existing toilet mechanism, as the existing floating ball rises.

0008 Below the Apportioning valve is a Cut-off Valve. As the weight of water in the Cylinder increases the Cut-off Valve, below, on Arm No 2, will close. Concurrently the Spring will apply downward pressure on ArmsNo1 and No2. and synchronously, the linkage to the Discharge Valve on Arm No1 will close that valve, and the flush will be completed. The invention will leave the device ready for the next flushing occasion.

0009 THIRD SECTION details the Handle turned to the left. The second Cantilever on the Handle will link to the existing in-place mechanism and will cause a total flush, This will remove solid wastes and liquid waste, as is normal.

When it has completed it cycle the Handle will resume its vertical position, for whatever flush will occur at a later time.

0010 CROSS-REFERENCE TO RELATED APPLICATIONS
Not Applicable

0011 STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT
Not Applicable

0012 REFERENCE TO SEQUENCE LISTING, A TABLE OR A COMPUTER PROGRAM LISTING COMPACT DISC APPENDIX
Not Applicable

BACKGROUND OF THE INVENTION

0013 There are so many articles in the newspapers and magazines about shortages of water required for human consumption and the difficulties to resolve them in an age of population expansions and/or explosive growth. It occurred to me that a small step might be taken if mechanisms used today to remove human waste could be modified to save some water.

BRIEF SUMMARY OF THE INVENTION

0014 The invention is a simple auxiliary mechanism installed within a working toilet. It will use approximately half the amount of water required for the liquid part of the flush. The existing toilet mechanism will provide the water for the solid and liquid flush.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE INVENTION

0015 Section 1: Installation of new Auxiliary device, with the new special Handle. Handle shown in vertical (or at rest) position.

Section 2: Tier 1 action. Device with Handle rotated to the right. Valving shows Discharge Valve open, Cylinder Valving open.

Section 3 Tier 2 action. Device with Handle rotated to left.

Invention's Valves are linked with existing toilet mechanism for the complete flush. Discharge Valves will close when the flush water in the tank, (for the solid and liquid waste) is depleted. Water level in the toilet tank will rise to refill the tank to complete the cycle

DETAIL DESCRIPTION OF THE INVENTION

0016 The invention will be installed within toilet bowls. They will function independently of the existing toilet mechanism for the Apportioning part of the flushing process(Tier 1), and in coordination (linked) with toilet mechanism for the total flush. (Tier 2) All this is linked together through the Handle mechanism. The Handle shall be a chrome-like finish on the outside of the bowl and corrosion resistant material inside the tank. It will have ball bearing action with gearing, There will be three limiting stops (1) a neutral position. (2) rotation to the right For the Tier 1 flush position, (3) rotation to the left for the Tier 2 flush position The Apportioning Valve installed within a cylinder will have variable openings to adjust for maximum water savings from the Tier 1 flush segment. It will be made of a corrosion resistant material. The same material can be used for the Cut Off Valve in the Cylinder (below the Apportioning Valve on Arm No 2. (along with a counter ewight) The weight can be segmented for initial adjustments fore the amount of water need to close the Cut-off Valve and then the Discharge Valve. The Discharge Valve will be similar or the same as that used for the existing toilet mechanism.